Aviation Medicine Quiz

1. Which of the following does not reduce the tolerance to +Gz acceleration
   a) Increased temperature
   b) Alcohol intake
   c) Hypercapnia
   d) Intercurrent infection

2. With 100% oxygen prebreathing and use of anti-G suit during +Gz exposure, acceleration atelectasis occurs at –
   a) +3Gz           b) +4Gz
   c) +5Gz           d) +6Gz

3. Minimum concentration of nitrogen required in the breathing gas to prevent significant acceleration atelectasis is –
   a) 30%           b) 40%
   c) 50%           d) 60%

4. Maximum tolerable –Gz acceleration is -
   a) -5 Gz for 5 seconds           b) -5 Gz for 10 seconds
   c) -5 Gz for 3 seconds           d) -5 Gz for 15 seconds

5. For adequate G tolerance, lower limit of resting heart rate after fitness training, should be –
   a) 65 bpm           b) 60 bpm
   c) 55 bpm           d) 70 bpm

6. G protective engineering features in the Rafale include –
   a) Increased seat back angle
   b) Leg elevation
   c) Both
   d) None

7. Heart rate responses to high sustained G acceleration include -
   a) Tachycardia
   b) Bradycardia
   c) Both
   d) None

8. Rhythm disturbance during +Gz exposure that compromises G tolerance
   a) Premature ventricular contractions
   b) Sinus bradycardia
   c) PVC and bigeminy
   d) Bradycardia with AV Dissociation

9. Rate of reduction of lung compliance with +Gz acceleration is –
   a) 15% per G           b) 10% per G
   c) 20% per G           d) 25% per G

10. Which of the following effects of sustained +Gz acceleration is operationally significant
    a) Acute neck injury
    b) G measles
    c) PVC in ECG
    d) Elevated skeletal muscle (MM) fraction of CPK enzyme
11. The first colour vision to be lost during black out is -
   a) Red  
   b) Blue  
   c) Green  
   d) Yellow-Green

12. During PBG, the pressure beyond which, chest counterpressure is required, is –
   a) 30 mm Hg  
   b) 35 mm Hg  
   c) 40 mm Hg  
   d) 45 mm Hg

13. Which of the following hormone level does not rise during +Gz acceleration –
   a) Cortisol  
   b) Adrenaline  
   c) Noradrenaline  
   d) None

14. Duration of exposure to +Gz acceleration is defined as the total time for which the acceleration exceeds –
   a) 2G  
   b) 3G  
   c) 1G  
   d) 4G

15. On exposure to +4.5 Gz, pressure in the jugular bulb falls to (normal pressure is -20 mm Hg) –
   a) -30 mm Hg  
   b) -70 mm Hg  
   c) -40 mm Hg  
   d) -50 mm Hg

16. Commonest level of cervical disc protrusion/annular tears in IV discs due to +Gz induced injury is –
   a) C1-2  
   b) C 3-4  
   c) C 5-6  
   d) C7 – T1

17. The schedule of anti-G suit inflation issued in USA is –
   a) 1.25 psi/G  
   b) 1.5 psi/G  
   c) 1.75 psi/G  
   d) 2 psi/G

18. Level of Gy acceleration at which left and right lungs start inflating and deflating sequentially –
   a) ±4-5Gy  
   b) ±1-2 Gy  
   c) ±2-3 Gy  
   d) ±3-4 Gy

19. Immediate cause of loss of consciousness on exposure to –Gz acceleration is –
   a) Sinus bradycardia  
   b) Tachycardia  
   c) Cardiac asystole  
   d) Ventricular bigeminy

20. Specific in-flight arrhythmia documented in people with MVP is –
   a) Premature ventricular contractions  
   b) Premature atrial contractions  
   c) Ectopic atrial rhythm  
   d) Ventricular tachycardia

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